

SEQUENCE LISTING

<110> FRASER, JOHN D.

<120> IMMUNOMODULATORY CONSTRUCTS AND THEIR USES

<130> 11752-007US1

<140> US 10/516,813

<141> 2004-12-03

<150> NZ 519371

<151> 2002-06-04

<150> PCT/NZ03/00111

<151> 2003-06-04

<160> 13

<170> PatentIn version 3.1

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<212> PRT

<213> Streptococcus pyogenes

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1 5 10 15

Val Tyr Glu Tyr Ser Asp Ile Val Ile Asp Phe Lys Thr Ser His Asn
20 25 30

Leu Val Thr Lys Lys Leu Asp Val Arg Asp Ala Arg Asp Phe Phe Ile
35 40 45

Asn Ser Glu Met Asp Glu Tyr Ala Ala Asn Asp Phe Lys Thr Gly Asp
50 55 60

Lys Ile Ala Val Phe Ser Val Pro Phe Asp Trp Asn Tyr Leu Ser Lys
65 70 75 80

Gly Lys Val Thr Ala Tyr Thr Tyr Gly Gly Ile Thr Pro Tyr Gln Lys
85 90 95

Thr Ser Ile Pro Lys Asn Ile Pro Val Asn Leu Trp Ile Asn Gly Lys
100 105 110

Gln Ile Ser Val Pro Tyr Asn Glu Ile Ser Thr Asn Lys Thr Thr Val
115 120 125

Thr Ala Gln Glu Ile Asp Leu Lys Val Arg Lys Phe Leu Ile Ala Gln
130 135 140

His Gln Leu Tyr Ser Ser Gly Ser Ser Tyr Lys Ser Gly Arg Leu Val
145 150 155 160

Phe His Thr Asn Asp Asn Ser Asp Lys Tyr Ser Phe Asp Leu Phe Tyr
165 170 175

Val Gly Tyr Arg Asp Lys Glu Ser Ile Phe Lys Val Tyr Lys Asp Asn
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Lys Ser Phe Asn Ile Asp Lys Ile Gly His Leu Asp Ile Glu Ile Asp
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<213> Streptococcus pyogenes

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Val Tyr Glu Tyr Ser Asp Ile Val Ile Asp Phe Lys Thr Ser His Cys
20 25 30

Leu Val Thr Lys Lys Leu Asp Val Arg Asp Ala Arg Asp Phe Phe Ile
35 40 45

Asn Ser Glu Met Asp Glu Tyr Ala Ala Asn Asp Phe Lys Thr Gly Asp
 50 55 60

Lys Ile Ala Val Phe Ser Val Pro Phe Asp Trp Asn Tyr Leu Ser Lys
 65 70 75 80

Gly Lys Val Thr Ala Tyr Thr Tyr Gly Gly Ile Thr Pro Tyr Gln Lys
 85 90 95

Thr Ser Ile Pro Lys Asn Ile Pro Val Asn Leu Trp Ile Asn Gly Lys
 100 105 110

Gln Ile Ser Val Pro Tyr Asn Glu Ile Ser Thr Asn Lys Thr Thr Val
 115 120 125

Thr Ala Gln Glu Ile Asp Leu Lys Val Arg Lys Phe Leu Ile Ala Gln
 130 135 140

His Gln Leu Tyr Ser Ser Gly Ser Ser Tyr Lys Ser Gly Arg Leu Val
 145 150 155 160

Phe His Thr Asn Asp Asn Ser Asp Lys Tyr Ser Phe Asp Leu Leu Tyr
 165 170 175

Val Gly Tyr Arg Asp Gln Glu Ser Ile Phe Lys Val Tyr Lys Asp Asn
 180 185 190

Lys Ser Phe Asn Ile Asp Lys Ile Gly His Leu Asp Ile Glu Ile Asp
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Ser

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Val Ala Glu Tyr Ser Asp Ile Val Ile Asp Phe Lys Thr Ser His Cys

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Leu Val Thr Lys Lys Leu Asp Val Arg Asp Ala Arg Asp Phe Phe Ile
 35 40 45

Asn Ser Glu Met Asp Glu Tyr Ala Ala Asn Asp Phe Lys Thr Gly Asp
 50 55 60

Lys Ile Ala Val Phe Ser Val Pro Phe Asp Trp Asn Tyr Leu Ser Lys
 65 70 75 80

Gly Lys Val Thr Ala Tyr Thr Tyr Gly Gly Ile Thr Pro Tyr Gln Lys
 85 90 95

Thr Ser Ile Pro Lys Asn Ile Pro Val Asn Leu Trp Ile Asn Gly Lys
 100 105 110

Gln Ile Ser Val Pro Tyr Asn Glu Ile Ser Thr Asn Lys Thr Thr Val
 115 120 125

Thr Ala Gln Glu Ile Asp Leu Lys Val Arg Lys Phe Leu Ile Ala Gln
 130 135 140

His Gln Leu Tyr Ser Ser Gly Ser Ser Tyr Lys Ser Gly Arg Leu Val
 145 150 155 160

Phe His Thr Asn Asp Asn Ser Asp Lys Tyr Ser Phe Asp Leu Leu Tyr
 165 170 175

Val Gly Tyr Arg Asp Gln Glu Ser Ile Phe Lys Val Tyr Lys Asp Asn
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Lys Ser Phe Asn Ile Asp Lys Ile Gly His Leu Asp Ile Glu Ile Asp
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